

CLAIMS

We claim:

1. A method comprising:

5 (a) engaging an end note bounding a stack of notes in an automated banking machine with a rotatable picking member, wherein the picking member is rotatable about a first axis, and wherein the picking member has in supporting connection therewith a middle disk portion and a first outboard disk portion disposed on a first axial side of the middle disk portion, and a second outboard disk portion disposed on a second axial side of the middle disk portion opposed of the first axial side;

10 (b) rotating the picking member about the first axis in a first rotational direction to a first rotational position, wherein the end note is engaged with a middle disk high friction arcuate segment in supporting connection with the middle disk portion, and a stripping member in opposed biased relation with the middle disk high friction arcuate segment, wherein the middle disk high friction arcuate segment and the stripping member apply opposing forces to the end note in a stripping area, and wherein in the first rotational position the end note is further engaged with a middle disk low

friction arcuate projecting portion in supporting connection with the middle disk portion and extending radially outward relative to the first axis beyond the middle disk high friction arcuate segment, and wherein in the first rotational position the middle disk low friction arcuate projecting portion engages the end note in a support area axially disposed on the middle disk portion of the stripping area, and wherein in the first rotational position of the picking member the end note is in engagement with a first outboard disk low friction portion in supporting connection with the first outboard disk portion and a second outboard disk low friction portion in supporting connection with the second outboard disk portion;

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(c) rotating the picking member in the first rotational direction from the first rotational position to a second rotational position, wherein in the second rotational position the end note is engaged with the middle disk high friction arcuate segment and the stripping member, and wherein in the second rotational position the low friction arcuate projecting portion does not extend radially outward beyond the middle disk high friction arcuate segment when in engagement with the end note in the support area, and wherein in the second rotational position the end note is in engagement with a first outboard disk high friction segment in supporting connection with the first outboard disk portion and a second outboard disk high

friction segment in supporting connection with the second outboard disk portion;

5 (d) rotating the picking member in the first rotational direction from the second rotational position, wherein the end note moves relative to other notes the stack in engagement with the middle disk high friction arcuate segment, the first outboard disk high friction segment, the second outboard disk high friction segment and in intermediate relation of the middle disk high friction arcuate segment and the stripping member, whereby the end note is generally separated from the stalk.

2. The method according to claim 1 and further comprising:

10 (e) after the end note moves into intermediate relation of the middle disk portion and stripping member, engaging the end note with at least one carry away member, and moving the end note in engagement with the at least one carry away member.

15 3. The method according to claim 2 wherein the at least one carry away member is in engagement with the picking member, wherein in (e) the at least one carry away member rotates responsive to rotation of the picking member.

4. The method according to claim 3 wherein the at least one carry away member is in opposed generally abutting relation with at least one of the middle disk portion, first outboard disk portion, and second outboard disk portion, and wherein in (e) the end note moves in intermediate relation between the at least one carry away member and the at least one middle disk portion, first outboard disk portion and second outboard disk portion.

5. The method according to claim 4, wherein the at least one carry away member is in opposed abutting relation with the middle disk portion, and wherein in (e) the end note moves in intermediate relation of the middle disk portion and the at least one carry away member.

10 6. The method according to claim 4, wherein the at least one middle disk portion, first outboard disk portion and second outboard disk portion has at least one resilient drive arcuate segment supported thereon, wherein in (e) the end note moves in intermediate relation of the at least one carry away member and the at least one drive arcuate segment.

15 7. The method according to claim 6 and further comprising:

(f) moving the at least one carry away member through engagement with the at least one drive arcuate segment at a time when the end note does not

extend in intermediate relation between the carry away member and drive arcuate segment.

8. The method according to claim 7 wherein the at least one drive arcuate segment extends a full circumference of the at least one middle disk portion, first outboard disk portion and second outboard disk portion, and wherein in (e) the end note is engaged in intermediate relation of a first portion of the at least one drive arcuate segment, and wherein in (f) the carry away member is engaged with a second portion of the at least one drive arcuate segment.
9. The method according to claim 8 wherein the first portion of the at least one drive arcuate segment with which the note is engaged in (e), is integral with the middle disk high friction arcuate segment.
10. The method according to claim 9 wherein the at least one drive arcuate segment comprises a continuous segment extending about the middle disk portion, wherein the at least one carry away member is disposed in a first rotational position relative to the stripping member, and wherein in (e) the end note moves in intermediate relation between the middle disk portion and the carry away member.
11. The method according to claim 10 wherein at least one of the first outboard disk portion and second outboard disk portion comprises at least one low friction arcuate segment

angularly disposed relative to the first outboard disk high friction segment and second outboard disk high friction segment, and prior to (a) further comprising:

(g) engaging the end note with the at least one low friction arcuate segment.

12. The method according to claim 11 wherein the first outboard disk portion comprises a continuous resilient first band extending circumferentially thereon, and wherein the continuous resilient first band includes the first outboard disk high friction segment, and wherein the first outboard disk portion includes at least one first flange portion extending transversely of the first band and radially outward beyond the first resilient band, and wherein in (g) the end note is engaged with the at least one first flange portion.

10 13. The method according to claim 12 wherein a first flange portion extends on each transverse side of and radially outward beyond the first band, wherein in (g) the end note is engaged with a first flange portion on each side of the first band.

14. The method according to claim 12 wherein the second outboard disk portion comprises a continuous resilient second band extending circumferentially thereon, wherein the continuous resilient second band includes the second outboard disk high friction segment, and wherein the second outboard disk portion includes at least one second flange portion extending transversely of the second band, and wherein in (g) the end note is engaged with the second flange portion.

15. The method according to claim 14 wherein one of a pair of first flange portions extends on each transverse side and radially outward beyond the first band on the first outboard disk portion, and wherein one of a pair of second flange portions extends on each transverse side and radially outward beyond the second band on the second outboard disk portion, and wherein in (g) the end note is engaged with first flange portions on each transverse side of the first band and second flange portions on each transverse side of the second band.

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16. The method according to claim 15 and prior to (b) further comprising:

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receiving from a user at least one input through at least one input device of the automated banking machine, the at least one input corresponding to a request for cash;

subsequent to (d), dispensing the end note from the automated banking machine to the user.

17. A method comprising:

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(a) in an automated banking machine including a stack of sheets, engaging an end sheet bounding the stack with a movable high friction picker surface,

wherein the high friction picker surface engages a first side of the end sheet;

5 (b) moving the high friction picker surface to urge the end sheet to move along a first direction into engagement with a stripping surface, wherein the stripping surface acts on a leading edge area and a second side of the end sheet opposed of the first side in a stripping area and resists movement of the end sheet from the stack, and generally prevents sheets other than the end sheet from moving from the stack and between the picker surface and the stripping surface;

10 (c) during at least a portion of (b) engaging the end sheet with a projecting surface in supporting connection with the picking surface and transversely adjacent to the stripping area, wherein deformation of the end sheet along the first direction by the stripping surface is minimized by engagement of the sheet with the projecting surface.

15 18. The method according to claim 17 wherein the picking surface comprises a high friction arcuate segment supported on a rotating cylindrical portion, and wherein in (b) the rotating cylindrical portion rotates in a first rotational direction.

19. The method according to claim 17 wherein in (c) the projecting surface engages the end sheet as the leading edge area moves intermediate of the picker surface and the stripping surface.

20. The method according to claim 19 wherein the picker surface comprises a surface of a high friction arcuate segment supported on a rotatable first cylindrical portion, and wherein the projecting portion comprises a low friction arcuate segment supported on the first cylindrical portion transversely disposed of the high friction arcuate segment, wherein in (b) and in (c) the cylindrical portion rotates in a first direction.

21. The method according to claim 19 and during at least a portion of (b) and subsequent to (c) further comprising:

(d) disengaging the end sheet from the projecting surface.

22. The method according to claim 21 and further comprising a picker member wherein the picker member comprises the first cylindrical portion, and wherein the picker member includes at least one outboard high friction arcuate portion transversely disposed from the high friction arcuate segment, and further comprising:

(e) during at least a portion of (d) engaging the end sheet with the at least one outboard high friction arcuate portion, wherein such engagement urges the end sheet to move in the first direction.

23. The method according to claim 22 wherein the picker member comprises a pair of 5 outboard cylindrical portions transversely disposed from the first cylindrical portion, and wherein each of the outboard cylindrical portions includes one of the outboard high friction arcuate portions, and wherein in (e) the end note is engaged with the outboard high friction arcuate portions on the outboard cylindrical portions.

24. The method according to claim 22 and subsequent to (e) further comprising:

10 (f) engaging the end sheet with a carry away roll, wherein the carry away roll urges the end sheet to move away from the stack.

25. The method according to claim 24 wherein in (e) the end sheet is moved between the carry away roll and the first cylindrical portion.

15 26. The method according to claim 25 wherein the first cylindrical portion includes a resilient band extending circumferentially thereon, and wherein the resilient band includes the high friction arcuate segment engages by the end note in (a).

27. The method according to claim 26 and prior to (b), further comprising:

receiving at least one input from a user corresponding to a request for cash through at least one input device of the automated banking machine, and subsequent to (f) delivering the end sheet to the user.